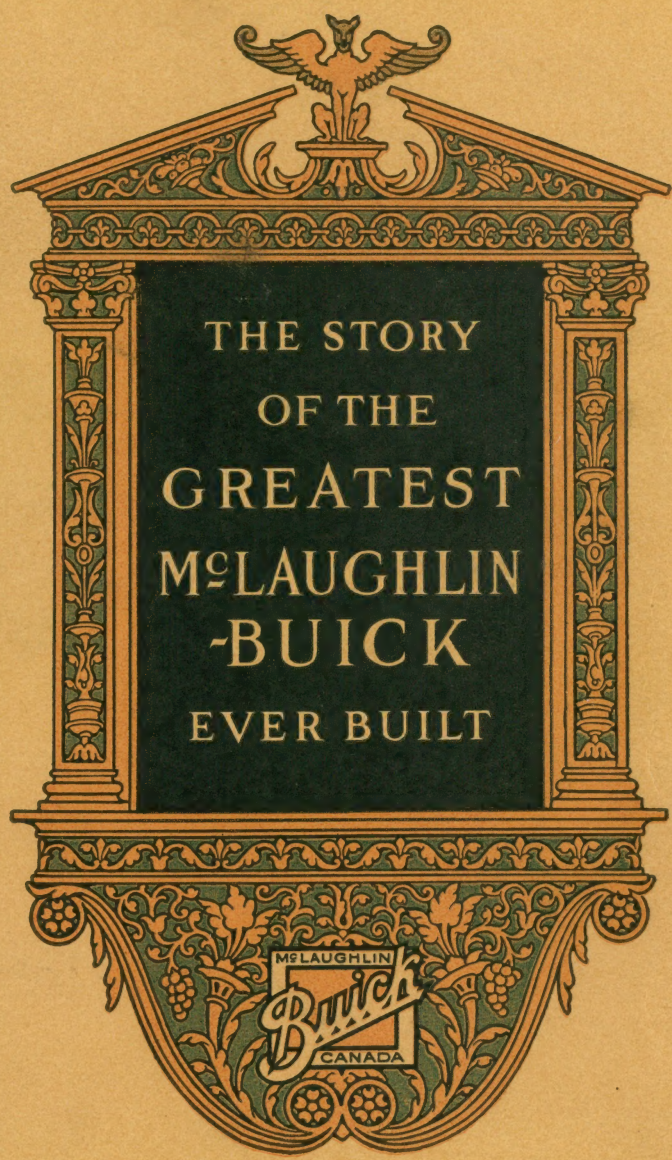


1927
RC. 83,000.6125



037



THE STORY OF THE
GREATEST
McLAUGHLIN-BUICK
EVER BUILT



McLAUGHLIN MOTOR CAR COMPANY, LIMITED

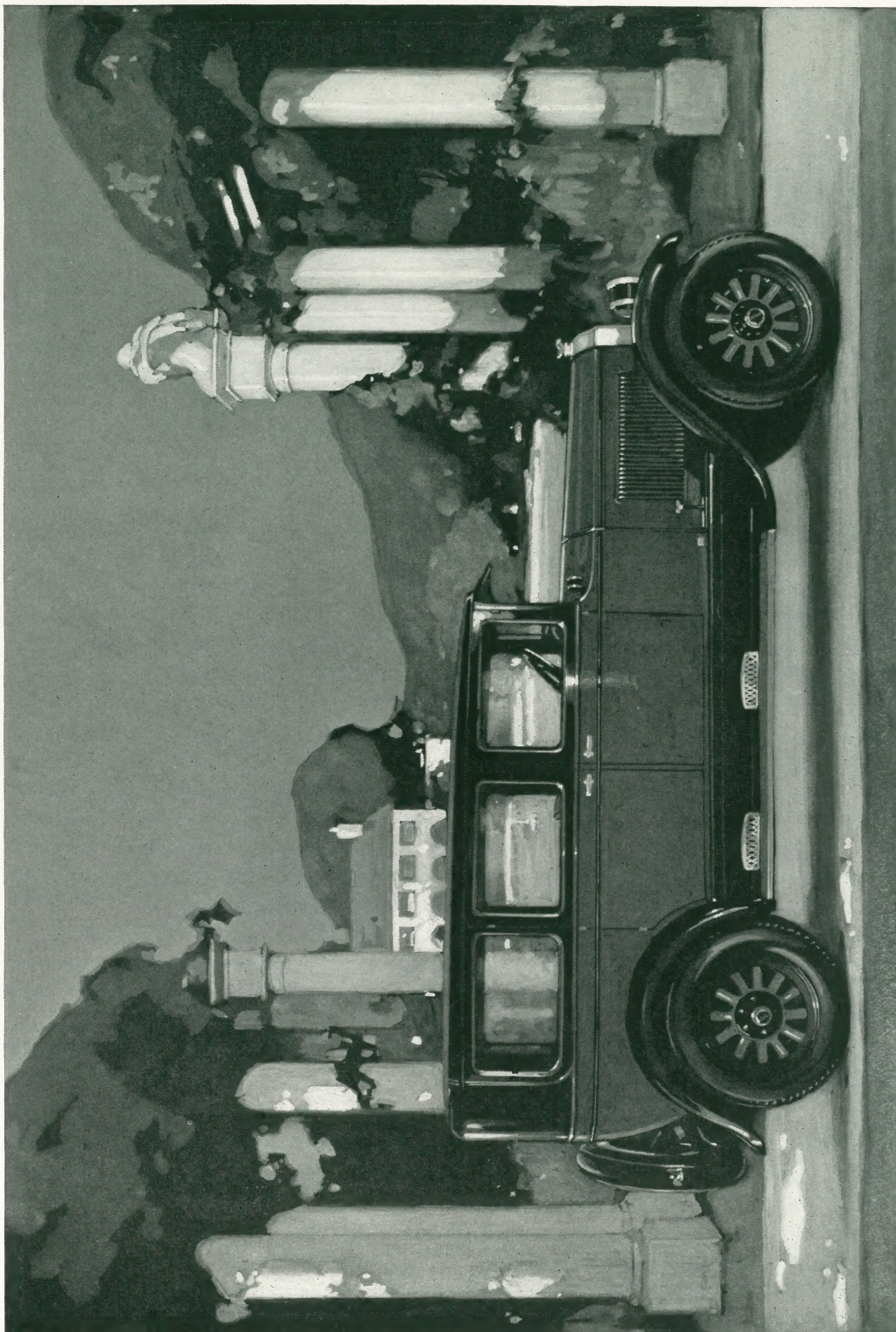
Subsidiary of General Motors of Canada, Limited

OSHAWA • ONTARIO

A Scale for Measuring Automobile Value

The story of the greatest McLaughlin-Buick ever built is presented to you in a sincere effort to aid you in judging all automobile values. For that reason the story is told at length and in detail. When you have read it, you will have a clear idea of the basic principles of good automobile building, as well as appreciation of the smaller, but none the less important, details. With these in mind it will be possible for you to judge the value, not only of the greatest McLaughlin-Buick ever built, but also the value of automobiles of any make. The mechanical parts of the car have been very fully pictured and described in order that you may have a distinct understanding of the refinements that have made the new McLaughlin-Buick vibrationless beyond belief. Even a brief glance through the book will be sufficient to show that this desirable condition is not due to one or two new features, but rather is the culmination of twenty-two years' constant development of principles that time has shown to be fundamentally correct. It is hoped that study of the book will lead you to make a thorough inspection of the cars themselves, for only in this way can you truly appreciate the new heights of beauty, comfort and convenience that McLaughlin-Buick has achieved. McLaughlin-Buick is content to rest its case on the results of thorough comparison





*Charm of line, proportion and color that makes every model a creation of compelling beauty
crowns the mechanical perfection of all the new McLaughlin-Buicks*



THE STORY OF THE GREATEST McLAUGHLIN-BUICK EVER BUILT

Introducing a new Era in Motoring

*When better
automobiles
are built,
McLaughlin-
Buick will
build them*

ACCUSTOMED as experienced motorists are to the constant fulfillment of McLaughlin-Buick's pledge to build better and ever better automobiles, they will yet find difficulty at first in fully appreciating the heights that have been reached in the new McLaughlin-Buick—the greatest McLaughlin-Buick ever built.

Truly, the new McLaughlin-Buicks have been developed to the point of sensational efficiency.

That is a statement that is in every way conservative. Motorists have learned through twenty-two years' experience that McLaughlin-Buick has never made a claim that could not be fully proved. Examination of the new McLaughlin-Buicks will show that this is still the case. They will find that the new McLaughlin-Buicks actually do introduce a new era in motoring.

*Vibrationless
beyond belief*

VIBRATIONLESS beyond belief—that is the outstanding fact about the greatest McLaughlin-Buick ever built. It is a fact simply expressed in three words—but its full meaning can be appreciated only after you have experienced for yourself the wonderful lack of vibration at all speeds, and have marveled at the absence of every kind of noise. Here, at last, is transportation in which you forget the vehicle and experience only the delight of smooth, effortless travel.

There is no secret about how this newest approach to motor car perfection has been achieved by McLaughlin-Buick. It is not due to one or two clever devices. It is the result of the further development of principles that McLaughlin-Buick has followed from the beginning.

*Counterbalanced
crankshaft*

THE basis of this wonderful performance—vibrationless beyond belief—is the McLaughlin-Buick Valve-in-Head engine. Already incomparably smooth in operation, it has been made still more so by the addition of counterweights and a torsion balancer to the crankshaft. At the same time the piston weight has been greatly reduced, but cast iron pistons are retained so that none of the wearing quality for which they have always been noted is sacrificed.

Not content with these steps alone, McLaughlin-Buick engineers have supported the engine in rubber mountings. This completely insulates the engine from the frame and any slight noise that might exist in the power plant cannot be transmitted to the body through the frame.

*Rubber
mountings
for engine*

At the same time particular attention has been paid to the muffler. Back pressure has been reduced and exhaust has been made extremely quiet.

Still another step—in providing performance vibrationless beyond belief—is seen in refinements of the transmission. Full involute teeth insure quietness at all speeds and the housing has also been altered to insure perfect alignment with the flywheel housing, and to eliminate clutch noises.

A cross member has been added to the frame near the rear engine mounting insuring greater strength and rigidity, and in short nothing has been overlooked that would contribute to making McLaughlin-Buick performance vibrationless beyond belief.

WHILE much attention has been devoted to this important phase of automobile development, other marked advances have also been made. The problem of removing water from the crankcase and keeping oil dilution within narrow limits has been solved, for instance: A simple device that has no moving parts, and requires no attention from the owner, effectively removes moisture from the crankcase. Acting in combination with a new thermostatic control of the water circulation in the cooling system, this insures easy starting, even in cold weather. The crankcase ventilating device also effects a notable saving in oil.

*Oil dilution
eliminated*

All the advancements that McLaughlin-Buick pioneered in past years have, of course, been retained. The chassis is still the sturdy McLaughlin-Buick sealed chassis, with every working part effectively protected against the entrance of foreign matter or the loss of lubricant.

THE dependable McLaughlin-Buick Valve-in-Head engine—now vibrationless beyond belief—also is sealed at every point. It has a gasoline strainer, air cleaner, and an oil filter. The McLaughlin-Buick multiple disc clutch, torque tube drive, McLaughlin-Buick mechanically operated four-wheel brakes, easy operating transmission, sturdy steering gear, automatic heat control, controllable beam headlights, and cantilever rear springs are other features that have established themselves firmly with motorists.

*Triple seals
on engine*

*Beauty of color
and line*

ALL the new McLaughlin-Buicks are finished in durable Duco colors, and such pleasing combinations have been effected that it seems impossible to describe them adequately with words. A visit to a McLaughlin-Buick dealer is the surest and quickest way to appreciate McLaughlin-Buick beauty. It is also the best way to study the sweeping lines of the closed bodies built by Fisher, the largest builder of closed automobile bodies in the world. Many refinements of exterior and interior detail will be noted, which are described elsewhere in this book.

McLaughlin-Buick open sport models, with their dashing lines, brilliant colors, and complete appointments, will also absorb your attention.

The black-walled low pressure tires on all models will be noted with approval. In combination with the sturdy and handsome wood wheels they add greatly to the smart appearance of the cars.

*Advancements
proved by
service*

ALL the developments and advancements that are found in these new McLaughlin-Buicks would be impossible without McLaughlin-Buick's wonderful research facilities. Not only does Buick maintain the largest and best equipped staff of engineers of any automobile manufacturer in the world, but these men and McLaughlin-Buick engineers have the full co-operation of the great General Motors Research Staff.

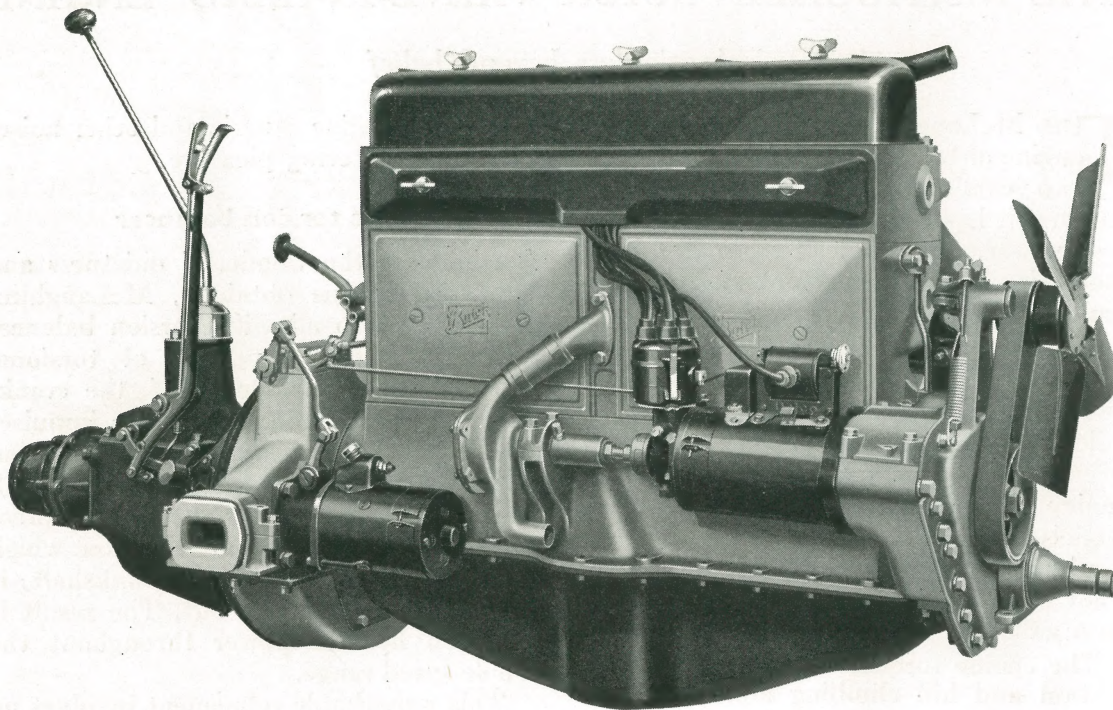
The General Motors Proving Ground, which affords every type of road condition, is at McLaughlin-Buick's disposal. A fleet of twenty-five Buick cars is kept constantly in operation here and elsewhere. Each car travels twenty-four hours a day, every day in the year, averaging from 300 to 600 miles every twenty-four hours.

Each improvement designed by McLaughlin-Buick engineers is thus thoroughly tested in thousands of miles of the most gruelling service. By the time it is included in new McLaughlin-Buick models it is long past the experimental stage. It has proved its worth to the McLaughlin-Buick owner. This is true of every feature of the new McLaughlin-Buicks.

*Unapproachable
value*

UNDOUBTEDLY, however, the feature about the greatest McLaughlin-Buick ever built that will most impress and please motorists is the price. In spite of the notable advancements that have been made, and the sensational value that has been built into every McLaughlin-Buick, the price is still remarkably low.

The tremendous demand for McLaughlin-Buicks in every part of this country, and throughout the world, makes possible this sensational value—the greatest McLaughlin-Buick ever built—vibrationless beyond belief.



THE McLAUGHLIN-BUICK VALVE-IN-HEAD ENGINE

Vibrationless beyond belief

The steady progress of twenty-two years is embodied in the McLaughlin-Buick Valve-in-Head engine. Always smooth and quiet, it has now been made vibrationless beyond belief by further development of its basic principles. The fundamental correctness of its design is clearly demonstrated by the fact that it develops more power per cubic inch displacement than any engine made to date, and in relation to the power developed is more economical of oil and gasoline than any other type.

THE McLAUGHLIN-BUICK VALVE-IN-HEAD ENGINE

Vibrationless beyond belief

THE McLaughlin-Buick Valve-in-Head engine of today is the result of twenty-two years' constant development. From the first it has been noted for its economy and power, and its leadership has been maintained by many outstanding advancements.

The powerful engine of the 114½-inch wheelbase models develops 60 horsepower and the cars have a maximum speed of 70 miles an hour and travel from eighteen to twenty miles on a gallon of gasoline. The engine of the 120 and 128-inch wheelbase models develops 75 horsepower, and the cars' maximum speed is 75 miles an hour. They travel from sixteen to eighteen miles on a gallon of gasoline.

The engine torque, which affects acceleration and hill climbing ability, is 140 foot-pounds on models 20 to 28 and 178 foot-pounds on the remainder.

Crankshaft is counterbalanced

Now the McLaughlin-Buick Valve-in-Head engine, already matchless in performance, makes a still nearer approach to perfection. It becomes vibrationless beyond belief.

This wonderful advancement has been brought about, not by the adoption of some one device, but by the careful and scientific development of every part of the engine and its related units.

The crankshaft of the McLaughlin-Buick engine is now counterbalanced. The balances, by off-setting the weight of the crankpins and the lower ends of the connecting rods, keep the crankshaft in line at all speeds. They also eliminate high main bearing pressures and deflection of the crankcase, which are among the chief

causes for engine rumble and other noises that mar motoring pleasure.

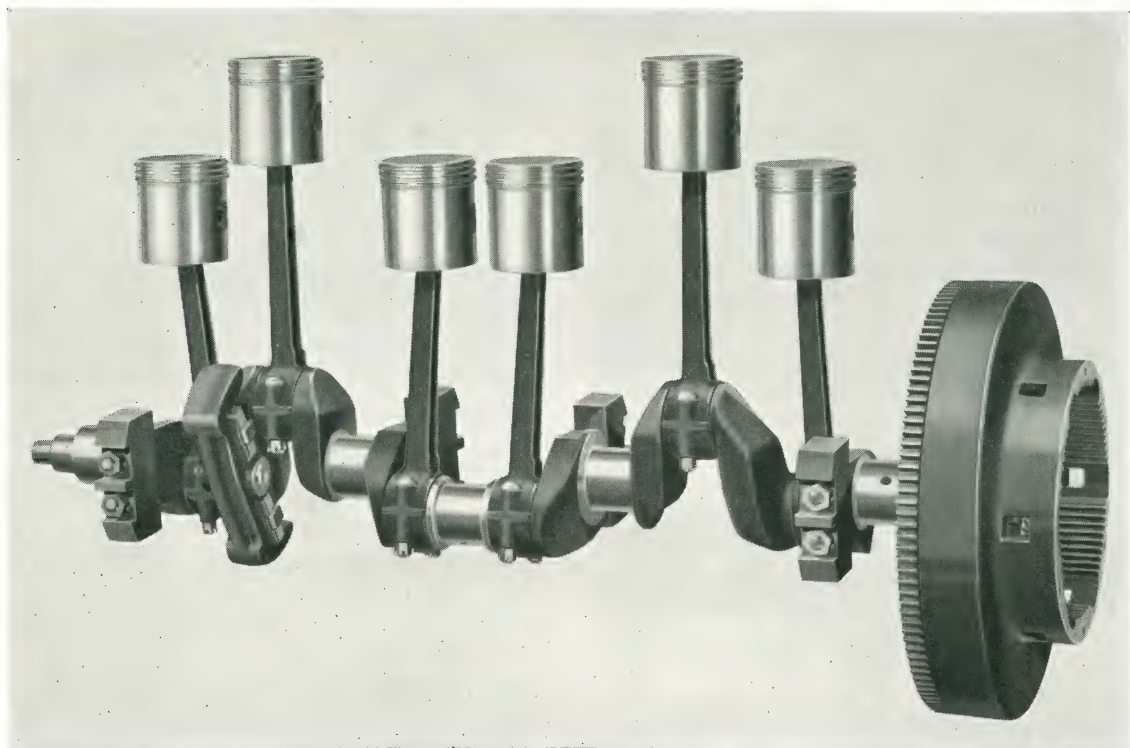
The torsion balancer

To increase the wonderful quietness and smoothness thus obtained, McLaughlin-Buick has also added a torsion balancer which counteracts periods of torsional vibration. The tendency of the crankshaft to twist under the power impulses of the pistons is absorbed by the torsion balancer and impulses are delivered back to the crankshaft after the piston forces are spent. Any period of vibration, which might tend to start in the crankshaft, is immediately smoothed out. The result is an even flow of power throughout the whole speed range.

This remarkable refinement involves no extra care for the McLaughlin-Buick owner. The torsion balancer is mounted on the second crankshaft cheek and is automatically and positively lubricated by the crankshaft oiling system. Being part of the crankshaft it is enclosed by the crankcase, and thus, like all working parts of the McLaughlin-Buick, is protected from dust, dirt, and atmospheric conditions. It is designed to last the lifetime of the engine without adjustment or attention.

Piston weight is reduced

As a further assurance of flexibility and smoothness, the strain on the crankshaft has been materially reduced by decreasing the weight of the pistons. This notable achievement in engineering has been accomplished without in any way reducing the strength or durability of the pistons, which are still made of cast iron.



The McLaughlin-Buick counterbalanced crankshaft with torsion balancer, heavier flywheel and cast iron pistons. The counterweights compensate the weight of the crankpins and lower ends of the connecting rods. They eliminate high bearing pressure and otherwise contribute to smooth operation. The torsion balancer overcomes the tendency of the crankshaft to twist under the power impulses of the pistons and assures an even flow of power at all speeds. The balancer is mounted on No. 2 crankshaft cheek and is completely enclosed in the crankcase. It is automatically lubricated by the crankshaft oiling system.

This is the best material because the cylinder block also is made of cast iron. Both the pistons and the cylinder block therefore have the same ratio of expansion and contraction. This makes it possible to fit the pistons close enough to insure smooth operation at all times.

Heavier flywheel

ANOTHER contribution to the smooth flow of power from the McLaughlin-Buick engine is made by the heavier flywheel. This helps to smooth the power impulses

into an uninterrupted flow at all speeds and plays an important part in making the McLaughlin-Buick vibrationless beyond belief.

Rubber mountings for engine

SUCH advancements as these might be thought sufficient by many people, but McLaughlin-Buick engineers have gone still further and have supported the McLaughlin-Buick engine in rubber mountings. These completely insulate the engine from the frame of the car, and any

slight noise that may develop cannot be transmitted to the interior of the car.

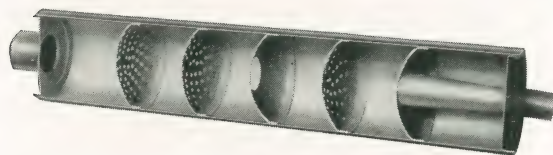
The mountings are made of special rubber of the very best grade, and are housed and protected so that the rubber will last indefinitely. While preventing the transmission of noise they hold the engine rigidly.

The principle of suspension has not been changed. It is still what is known as three-point suspension; that is, the engine is supported at two points in the rear and one in front. The value of this is that the engine is not affected by slight distortions of the frame caused by uneven roads. It also relieves the engine of acting as a cross member for the frame, in doing which it would suffer many unnecessary strains and stresses. The life of the engine is thus lengthened and upkeep and service costs are reduced.

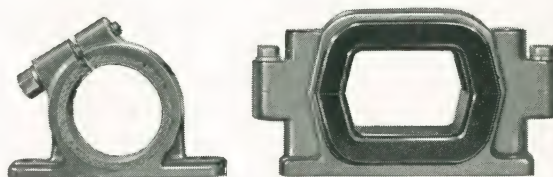
These refinements, just described, contribute quietness as well as smooth performance to the McLaughlin-Buick. A still further step in the elimination of noise has been taken in the refinement of the cams and valve springs. Always noted for their quietness, these parts are now still more silent.

Exhaust system is quiet

ANOTHER important step along this line is the development of an improved exhaust



The new construction of the McLaughlin-Buick exhaust is very strong and effectively dampens exhaust noises. Baffles are welded directly to the outer shell, eliminating horizontal tubes. A long tail pipe carries exhaust gases entirely clear of the car and eliminates body rumbles, due to exhaust gas expelled under the rear part of the car, thereby contributing to the quietness which is an outstanding characteristic of the new McLaughlin-Buicks.



Rubber engine mountings, by insulating the engine from the frame, aid greatly in eliminating body rumbles. McLaughlin-Buick three-point suspension is retained. The round mounting supports the front and two of the other type support the rear of the engine. The rubber is of the very best grade and is carefully protected, giving it a generous extra margin of durability. The new mountings hold the engine rigidly.

system. A muffler of new design eliminates roar and other usual exhaust noises.

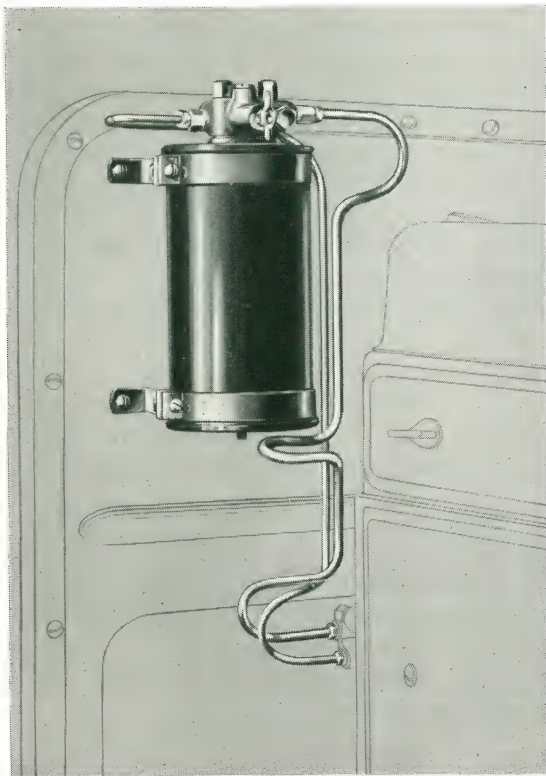
The tail pipe has been extended from the muffler to the extreme rear of the frame so that exhaust gases are carried clear of the chassis, and body rumbles due to exhaust noise are eliminated.

The muffler is sturdy and has a large number of baffles welded directly to the outer shell, eliminating horizontal tubes.

The exhaust manifold is securely clamped to the cylinder head, and the possibility of distortion or leakage is practically eliminated by extra studs that clamp each part of the exhaust manifold on both sides. Leakage at other points is prevented by improvement of all joints and connections between the exhaust manifold and the tail pipe. A new casting has been designed for the muffler header to receive the car heater valve, and this connection, too, is leakproof.

All these features play an important part in making the new McLaughlin-Buick vibrationless and noiseless beyond belief. They furnish proof of the statement that this remarkable advancement has not been brought about by one or two devices, but by development of the principles on which McLaughlin-Buick has been building for twenty-two years, with success that grows greater and greater year by year.

FEATURES THAT PROTECT THE McLAUGHLIN-BUICK ENGINE



The oil filter of the McLaughlin-Buick is the AC round type with a rolled filtering element with a total area of 600 square inches. It effectively prevents sediment or other foreign matter from reaching the moving parts of the engine.

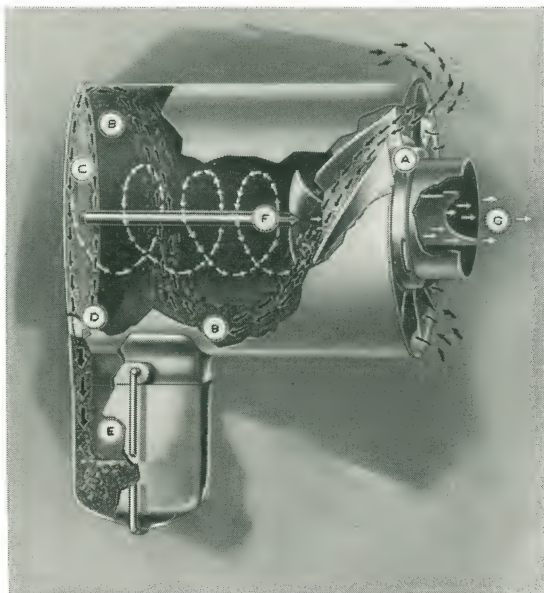
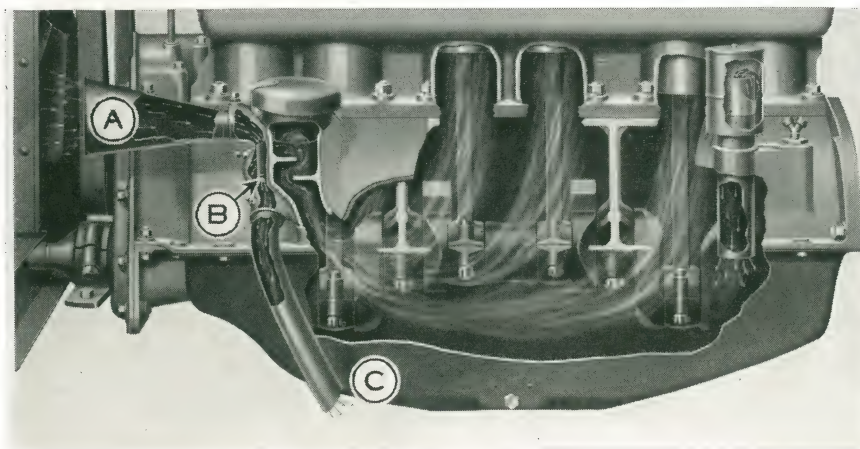


Diagram showing how the AC air cleaner prevents dust from entering the carburetor. (A) Suction stroke of engine draws dust-laden air through cleaner's directing vanes, which give it a rapid, spirally rotating motion. (B) Centrifugal force separates the dust particles from the air, throwing them against the inside wall of the cleaner. (C) The spiral movement of the dust along the inside surface of the cleaner wall brings it to rear circular end. (D) Dust is forced through small outlet. (E) Dust collects in removable container. (F) Clean air, indicated by white arrows, rotating spirally in center portion, strikes directing plate (F) and screws itself out of cleaner. (G) Straightened current of clean air leaves cleaner to enter carburetor.



← This diagram illustrates how crankcase dilution is stopped in the McLaughlin-Buick engine by means of a simple device with no moving parts, and requiring no attention from the owner. Cold air drawn through the radiator by the fan rushes through the funnel (A), past a small opening (B), in the crankcase. This causes a suction which pulls out vapor and steam that have formed in the crankcase and expels them to the open air at (C). They have no opportunity to condense and dilute the oil.

CRANKCASE DILUTION ELIMINATED

By the designing and development of a crankcase ventilator and a thermostatic water control, McLaughlin-Buick has made outstanding contributions to motoring. Dilution of oil in the crankcase is eliminated, effecting a desirable economy for the motorist, and cold weather driving conditions are very greatly improved.

The value of the crankcase ventilator on the McLaughlin-Buick is apparent when one recalls that in the burning of gasoline in an automobile engine, water is produced in the form of steam. Some of this steam finds its way past the pistons and into the crankcase.

When an engine is started cold, the heavy ends of the fuel, which are not combustible below a certain engine temperature, also reach the crankcase in the form of vapor.

Unless the steam and vapor are removed they condense and cause dilution. This necessitates frequent change of oil.

The McLaughlin-Buick crankcase ventilator effectively prevents such conditions by ejecting the vapors from the crankcase before they condense and mix with the oil. It is a simple device, without moving parts, and requires no attention from the owner. Its operation can easily be understood by glancing at the accompanying diagram and the explanatory matter with it. Air drawn through the radiator by the fan is blown through a funnel past an opening in the crankcase. This causes a suction which pulls out the vapors, and not only prevents dilution but prevents unpleasant odors from reaching the interior of the car.

Economy in the use of oil, which has already been greatly advanced by the McLaughlin-Buick oil filter, is carried still further by ventilation of the crankcase and a change of oil is required only four times a year, an advantage that owners will greatly appreciate.

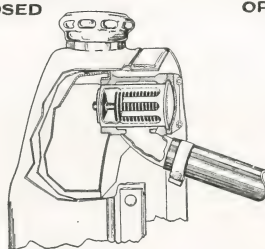
THERMOSTATIC WATER CONTROL

While the McLaughlin-Buick crankcase ventilator effectively removes water and vapor that cause crankcase dilution, it is desirable to reduce the formation of such vapor and steam as much as possible. This is accomplished by means of the McLaughlin-Buick thermostatic control of the engine cooling system.

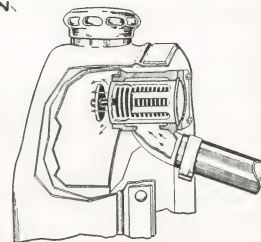
The thermostat is built into the radiator. It blocks the operation of the cooling system until the engine has warmed up to 120 degrees. Even in very cold weather the McLaughlin-Buick engine will now reach this point in less than three minutes, as it is not retarded by cold water circulating from the radiator.

As soon as an engine heat of 120 degrees has been reached, the thermostatic control

THERMOSTAT
CLOSED



THERMOSTAT
OPEN



The operation of the thermostatic control of the McLaughlin-Buick cooling system is illustrated in these diagrams. When the engine is started the control blocks circulation of the water, as shown in the diagram above, until the water reaches a temperature of 120 degrees. It then opens gradually, as shown in the right-hand diagram, and permits the water to circulate as usual. If the engine is stopped, the control again shuts off circulation when the water temperature falls to 120 degrees. Quick starting, even in cold weather, is thus greatly aided.

begins to open gradually until the cooling system is working as usual. If the temperature begins to fall the thermostatic control automatically shuts off circulation at 120 degrees. Thus, if the car is parked after being warmed up, the engine is kept warm for a long period and starting is much easier and quicker.

Another advantage is that quick warm-up eliminates the excessive use of the choke, which is a very common cause of crankcase

dilution because it causes raw gasoline to reach the combustion chambers. This raw gasoline is not combustible and it eventually finds its way into the crankcase, diluting the oil in the reservoir.

By providing practically summer operating conditions, even in severe weather, the AC thermostatic control makes the need for the choke very infrequent. It makes the McLaughlin-Buick engine, already noted for easy starting in cold weather, still easier to start.

THE AIR CLEANER

Its value proved by millions of miles of use on thousands of McLaughlin-Buick cars, the AC air cleaner stands out as a valuable and important feature of the greatest McLaughlin-Buick ever built. It prevents dust from entering the carburetor and the working parts of the engine.

The importance of this can be realized when it is remembered that an automobile engine consumes many thousands of feet of air for every gallon of gasoline.

Road dust pollutes this air and would very severely wear the engine's moving

parts, because it is composed largely of minute particles of sharp-edged sand or quartz. Sucked into the carburetor with the air, dust would mix with the oil film on the cylinder walls where it would grind away the efficiency of the engine with each stroke of the piston.

The AC air cleaner, simply constructed without moving parts, effectively prevents this injurious action. Operating on the same principle as the ordinary cream separator—centrifugal force—it separates the dust from the air, and only the purified air passes into the carburetor.

GASOLINE STRAINER IMPROVED

McLAUGHLIN-BUICK's policy of constant improvement of every part of the car is demonstrated in the case of the gasoline strainer. The value of this device has been proved beyond question by thousands of McLaughlin-Buick owners under all kinds of conditions.

The gasoline strainer collects all sediment or dirt that may be in the gasoline and prevents it from reaching the carburetor. The possibility of dirt getting into the needle valve of the carburetor and interfering with

its efficient operation is practically eliminated, and the McLaughlin-Buick is thus effectively sealed at another point against foreign matter of any kind.

Formerly the gasoline strainer was held in place by a nut and a bolt that extended through the bottom of the glass container. While this was very satisfactory, a still better mounting has been developed. The glass container is now held firmly in place by a wire loop. There is no opening in the bottom of the container and the possibility of leakage is eliminated.

THE McLAUGHLIN-BUICK OIL FILTER

THE oil filter, too, is an example of McLaughlin-Buick's constant search for developments that will make the McLaughlin-Buick still more satisfactory and valuable to the owner.

McLaughlin-Buick determined the value of such a device by thorough tests before adopting it, and since then it has proved its worth by the actual service it has given on thousands of McLaughlin-Buick cars.

Its function is to prevent sediment and dirt in the oil from reaching the working parts of the engine. This adds to the life and efficiency of the engine, and also effects

an economy in oil, as the filter makes it unnecessary to drain the crankcase so frequently. Co-operating with the new crankcase ventilator and the thermostatic water control, which prevent crankcase dilution, the oil filter insures the owner of maximum life for the engine, and maximum economy in the use of oil.

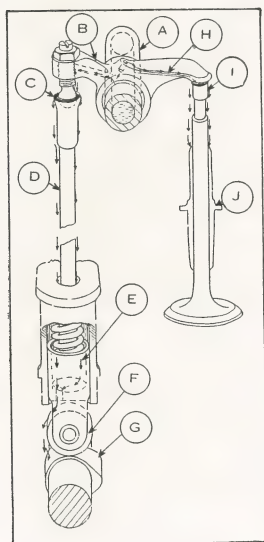
The filtering element now has a total area of 600 square inches. The former filtering element had an area of 400 square inches. The increase of 200 square inches means longer life for the filter.

The filter is especially designed for easy removal and replacement.

LUBRICATION CONTRIBUTES TO QUIETNESS

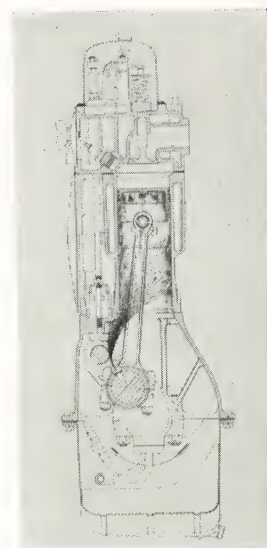
TO lubricate the McLaughlin-Buick engine it is only necessary to put oil in the crankcase. The rest of the work is done automatically by the full pressure type lubrication system. A pump draws the oil from

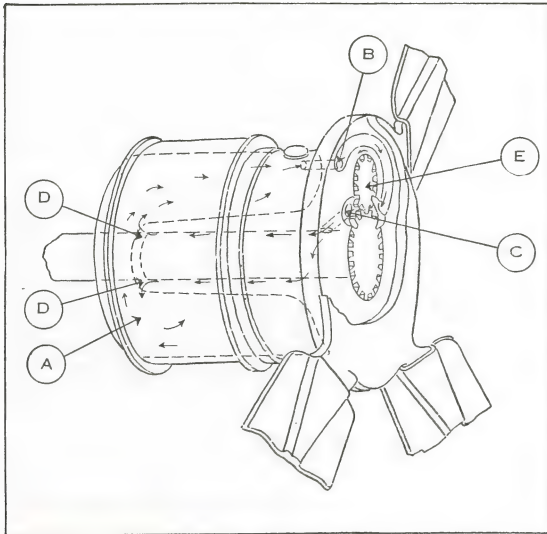
the reservoir in the crankcase, and the oil is then forced under pressure to all main bearings, connecting rods and the Valve-in-Head mechanism. The new torsion balancer is lubricated by the crankshaft oiling system.



← The rocker arm shaft (A) and the rocker arms (B) are lubricated by oil circulating under pressure through the rocker arm shaft. The socket or cup (C) at the top of the push rod (D) retains a film or cushion of oil. The oil then flows down the sides of push rod, lubricating the lifter (E) and forming a film of oil between the cam roller (F) and the cam (G). Oil is also drawn through the rocker arm at (H) forming a film of oil at (I). It then flows down the valve stem, lubricating the valve stem guide (J). All metal to metal contact is eliminated and quietness is assured.

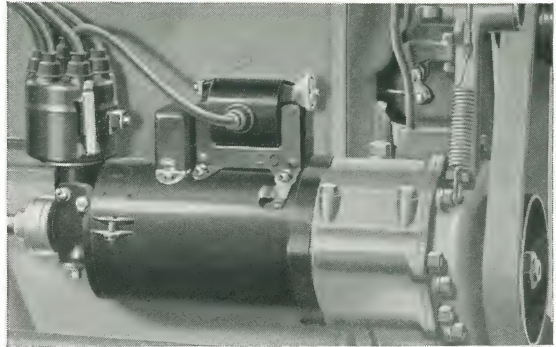
→ This diagram shows how the cylinder walls are lubricated by oil under pressure from the crankshaft. There is a small opening in the part of the connecting rod that surrounds the crankshaft. As the crankshaft turns, it brings a channel from its bored center in line with the opening in the connecting rod. The oil in the crankshaft, being under pressure, spurts through this opening as shown in the diagram, lubricating the cylinder walls and the wrist pin.





The McLaughlin-Buick fan, with oil reservoir and gear pump in its hub, requires attention from the owner only at rare intervals.

- A—Oil reservoir.
- B—Oil drawn from reservoir by gear pump.
- C—Oil forced to bearing by pump.
- D—Oil re-entering oil reservoir from the end of bearing.
- E—Gear pump.



The Delco generator, with distributor and coil built as integral parts, providing current for lighting and ignition and keeping the storage battery properly charged. It is positively driven by the timing gears, quiet in operation, and practically trouble-proof. It is so designed that it is automatically disconnected from the battery when not travelling at charging rate, in order to prevent discharging the battery.

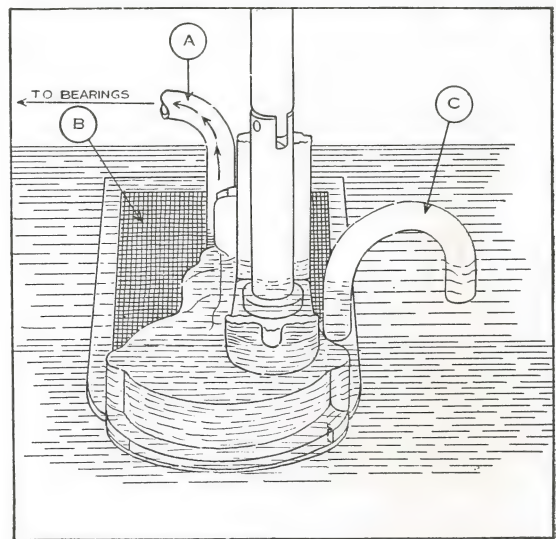
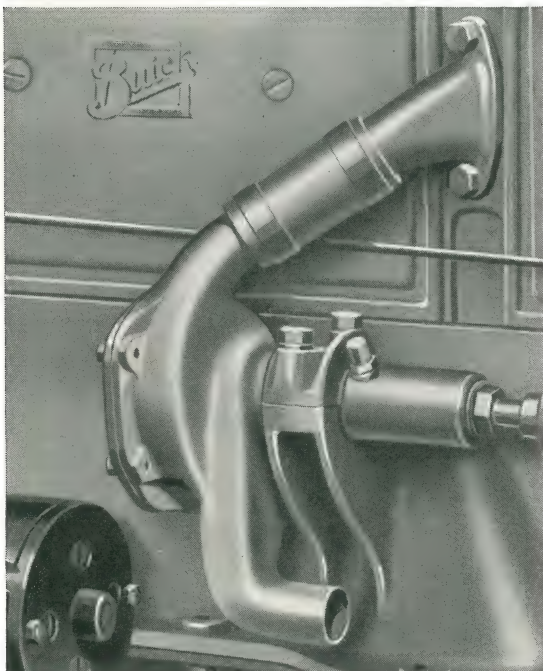


Diagram illustrating the advantage of having the oil pump located at the lowest point in the oil reservoir, positively insuring lubrication of the engine even though the oil becomes extremely low. Oil is drawn by the pump through screen (B), forced under pressure through the pipe (A). Should the screen become clogged, oil is drawn through the by-pass pipe (C), then to the bearings through pipe (A). The oil flows through this by-pass pipe until the screen becomes clear and admits oil to the pump direct.



← To take up wear on the packing of the McLaughlin-Buick water pump it is only necessary to give the packing nut a slight turn. This construction also reduces the possibility of leakage to a minimum.

Smooth operation and long life for all the working units are thus assured with practically no attention from the owner, and there is a second advantage as well. The lubrication system contributes to the quiet running of the McLaughlin-Buick engine by preventing all metal to metal contact.

The rocker arms and push rods are lubricated by oil circulating under pressure through the rocker arm shaft. The oil is forced under pressure across the rocker arm to the ball and socket joint at the top of the

push rod. The socket or cup at the top of the push rod is constantly covered with a film of oil, which acts as a cushion between the cup and the rocker arm adjusting ball. It is these oil cushions that contribute to the quietness of the engine.

The oil as it overflows from the cup, trickles down the side of the push rod lubricating the lifter guide and roller. At this point there is a film of oil between the cam on the camshaft and the push rod roller. Surplus oil drops into the crankcase.

THE McLAUGHLIN-BUICK OIL PUMP

By its positive and efficient operation, the McLaughlin-Buick oil pump relieves the owner of all worry about the lubrication of this engine.

It is located in the very lowest part of the oil reservoir at the bottom of the crankcase, thus insuring lubrication of the engine even though the oil supply should fall very low.

The pump is equipped with an auxiliary pipe through which oil is drawn if the screen becomes clogged, so that proper lubrication of the engine is assured at all times. The pump is of the positive gear type and is the most efficient known. It is typical of McLaughlin-Buick's high mechanical standard.

AUTOMATICALLY LUBRICATED FAN

No part of the car is regarded by McLaughlin-Buick as too small or unimportant to deserve constant study and development. Such a simple feature as the fan, for instance, reveals the constant effort to build ever Better McLaughlin-Buicks. The McLaughlin-Buick fan is so construct-

ed that it needs attention from the owner only once in about 15,000 or 20,000 miles. There is an oil reservoir in the fan hub, and a gear pump keeps the fan properly lubricated at all speeds. The reservoir is easily replenished when the need arises at long intervals.

THE WATER PUMP

The new thermostatic control of the McLaughlin-Buick cooling system shuts off circulation of water until an engine temperature of 120 degrees is reached. Above this temperature it is important that the water should circulate efficiently, and this is assured by the McLaughlin-Buick water pump which, by promoting effective cooling, contributes to smooth operation.

The McLaughlin-Buick water pump is very simple in construction and there is little opportunity for trouble to develop. Only one packing nut is used, thus reducing the possibility of leakage to a minimum.

The pump shaft is hardened, ground, and small in order to reduce the friction surface on the packing.

THE GENERATOR

THE Delco generator on the McLaughlin-Buick is an integral part of the engine. It provides electric current for lighting and ignition and for keeping the storage battery charged. It is driven direct by the timing gears and is equipped with a cut-out relay, that automatically disconnects the generator from the battery when it is not being driven at charging speed. Discharging of the battery when the engine is idling is thus prevented.

All high tension connections on the distributor and coil are in rubber ferrules.

This prevents water getting into the connections and causing short circuits—another example of the way in which the McLaughlin-Buick is protected at every point to insure dependable operation.

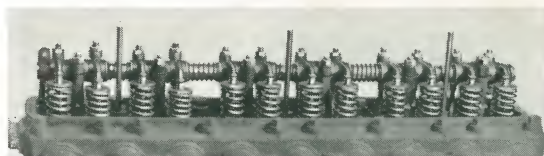
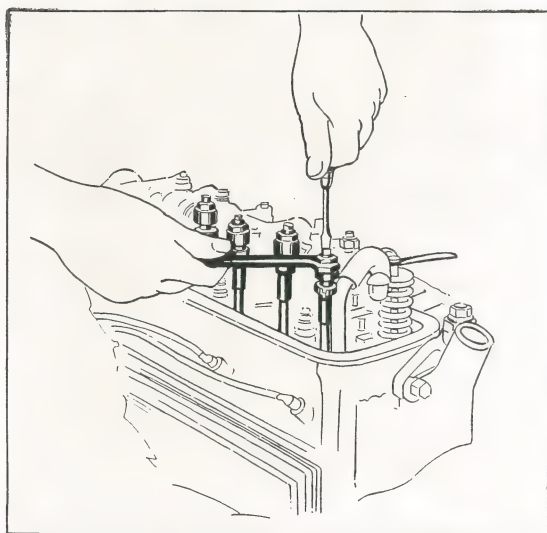
Compact and efficient, this generator of the latest type and design, is typical of McLaughlin-Buick equipment.

McLAUGHLIN-BUICK VALVES ARE ACCESSIBLE

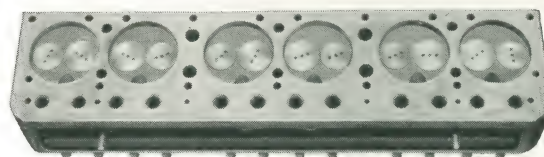
ANOTHER example of McLaughlin-Buick excess value has been retained in the accessibility of the valves for adjusting and grinding, made possible by the McLaughlin-Buick Valve-in-Head principle of engine construction. The valves are exposed simply by removing the valve cover, and they may then be easily adjusted with a screw-driver and a small wrench.

Grinding valves, which is seldom necessary on a McLaughlin-Buick, is also a simple operation. Removal of a few studs

makes it possible to lift the head, in which the valves are assembled, off the block. This exposes the entire combustion chamber and the heads of the pistons. This effects a great saving of time and expense and is typical of the care and attention that McLaughlin-Buick engineers have devoted to insuring a maximum of service and satisfaction for every McLaughlin-Buick owner at a minimum expense and trouble.



← To adjust the valves on a McLaughlin-Buick Valve-in-Head engine it is only necessary to remove three nuts, lift off the cover and expose the valves. There are no obstructions whatever, and the valves may be adjusted with a small screw-driver and one wrench. To grind the valves a few other nuts are removed and the entire head, containing all the valves, may then be lifted off. This exposes the entire combustion chamber and the tops of the pistons.



THE CARBURETOR AND HEAT CONTROL

McLAUGHLIN-BUICK has developed a most efficient carburetion system to assure easy starting, a quick warm-up, and even distribution of gasoline to all cylinders.

The function of the carburetor is to mix gasoline and air in proper proportions for combustion in the engine. The McLaughlin-Buick carburetor is greatly aided in this task by the fact that both the air and the gasoline that reach it are thoroughly cleaned and strained so that a pure, powerful mixture is assured.

Heat plays an important part in carburetion as gasoline does not vaporize readily at a low temperature. Provision is made therefore to heat the mixture of air and gasoline as it rises from the carburetor to enter the combustion chambers. It is necessary, however, that this heat be regulated, as it is not desirable to heat the vapor too highly. In the McLaughlin-Buick carburetion system this regulation is accomplished automatically.

Heat is obtained by diverting the gas from the exhaust manifold around the chamber immediately above the carburetor. The valve that controls this flow of hot gas is regulated by the speed of the engine. In starting, or while running at slow speed, the valve allows as much heat as possible to pass around the carburetor. As speed increases and the engine warms up the valve

reduces the flow of heat until eventually all of it passes out directly through the exhaust and none circulates around the carburetor. This prevents overheating which would cause the gas mixture to deteriorate and lose some of its power producing quality.

The valve which thus governs the heat is connected with the accelerator lever. It is forced open as acceleration is advanced and closes as acceleration is decreased.

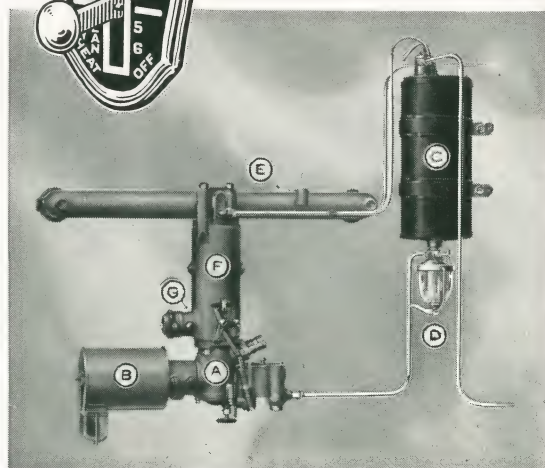
Manual heat control

IN addition to this automatic control, there is a manual heat control on the instrument panel. Its chief function is to regulate the time at which heat is cut off from the carburetor.

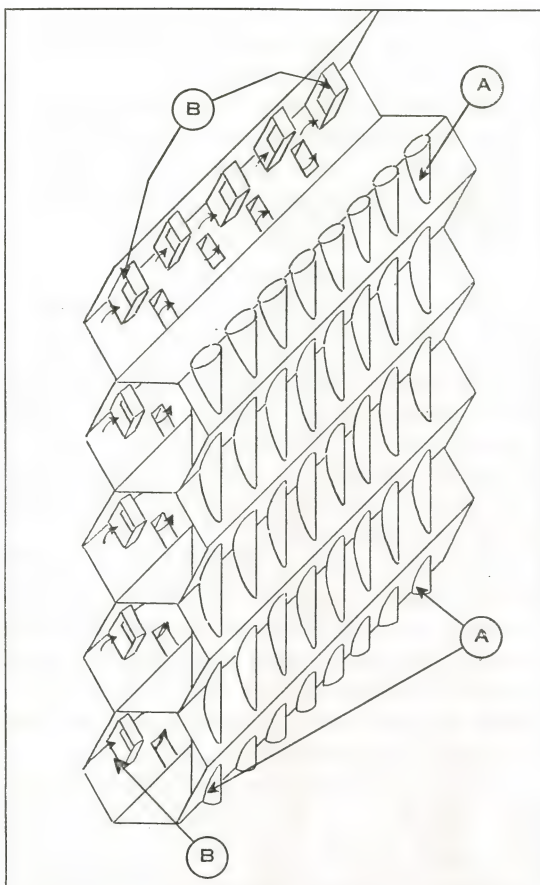
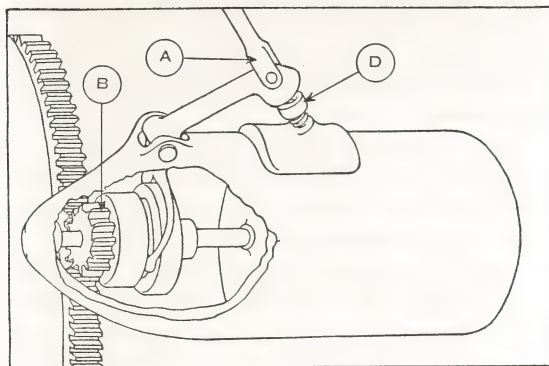
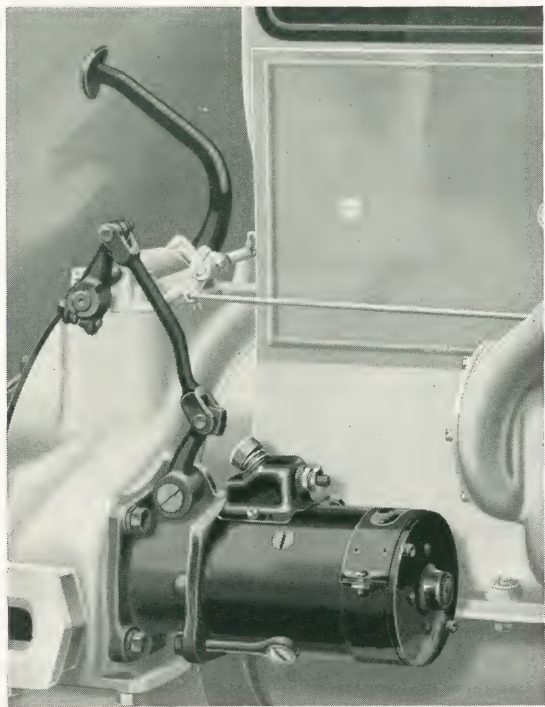
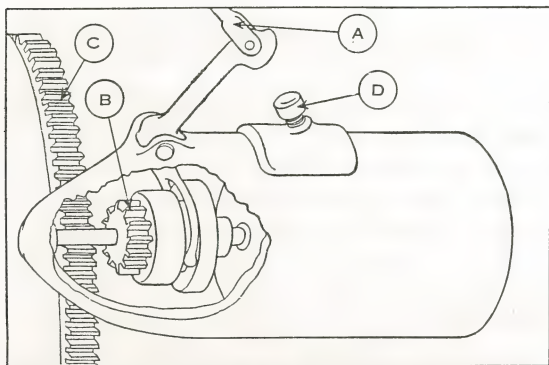
With the lever at medium position, for



This device on the dash board affords manual control of the heat to the carburetor as described in the accompanying article. When starting cold engine pull choke button out. As soon as the engine is running evenly push the choke button all the way in. Thermostatic control of the cooling system, which assures quick warm-up of the engine, greatly reduces the need of using the choke.



Much of the great power of the McLaughlin-Buick Valve-in-Head engine is due to the correct design of the carburetor and manifold system. This illustration shows the carburetor (A) with the air cleaner (B), which removes all dirt; the vacuum tank (C), with gasoline filter (D); the inlet manifold (E), and the carburetor riser (F) connecting the carburetor with the inlet manifold. Exhaust gas enters at the rear of the riser (F) and goes out at (G) heating the gas to a proper temperature as it rises from the carburetor to the inlet manifold. In this system the heat is regulated automatically, according to the speed of the engine. There is more heat in starting and at low speeds, and less heat as the speed increases, preventing overheating of the gas before it enters the cylinders.



Sectional view of the McLaughlin-Buick radiator. The water is carried in an irregular course through the many cells (A). The large number of radiating fins (B) are cooled by the air as it is drawn through by the fan. These radiating fins are staggered so that the air is broken up as it passes through. The fins provide a large radiating surface, and the air in its irregular course through the air chambers retains its cooling efficiency for the entire thickness of the radiator.

← Diagrams illustrating the operation of the Delco starter. Pressing on the starter pedal on other end of rod (A) pushes the gear on the starter motor shaft (B) into mesh with the teeth on the flywheel (C). Further depression of the pedal makes a contact with the switch button (D) on the starter motor. This puts the starter motor in operation and turns the engine. Note that the starter motor cannot be in operation, and the gear (B) does not begin to turn, until it is in mesh with the teeth on the flywheel. This insures smooth operation without clashing of gears, and practically eliminates the breaking of teeth on the flywheel. The electric starting motor on the McLaughlin-Buick insures rapid turnover of the engine and a quick start. It is so designed and constructed that possibilities for trouble are reduced to a minimum.

instance, the valve regulating the heat shuts it off at a lower speed than when the lever is at "heat-on" position. With the control in "heat-off" position, or all the way down, the valve allows some heat to pass around the carburetor at low speed, but at higher speed it cuts off the heat entirely.

A simple rule to follow is: When driving in traffic have the lever at "heat-on" or near to it. For country driving pull the lever down to "medium" or "heat-off," according to the weather. Regardless of the position of the heat control lever, there is no difference in gasoline consumption.

THE STARTER

EASY starting, for which the McLaughlin-Buick is noted, is due to the complete harmony of all the moving parts in the McLaughlin-Buick. This insures certain, dependable response when the starter pedal is pushed down.

The Delco starter itself contributes much to this eager, spirited performance. The starting motor is of the positive mechanical type. Pressing down on the starting pedal pushes the starting gear into mesh with the teeth on the flywheel before the starting motor gets into operation.

Not until the starting and flywheel gears are safely in mesh, is a contact formed with the switch mounted on top of the starting motor. This completes the starting motor circuit to the battery in a direct and positive

manner, providing fast cranking of the engine, with greater break-way torque, insuring effective starting, especially in extremely cold weather.

The starter pinion is equipped with an overrunning clutch which allows the flywheel to run ahead of the starting motor when the engine starts.

The flywheel teeth are cut in a special hardened steel ring, with teeth chamfered for easy engagement with the starter. The ring is shrunk onto the flywheel, thus providing extra strength.

The starting motor is a separate unit from the generator. It is very powerful, positive in action, and practically proof against trouble of any kind.

THE McLAUGHLIN-BUICK RADIATOR

THE thousands of motorists who are now driving McLaughlin-Buicks can testify to the efficiency of the McLaughlin-Buick radiator. It is the efficient cellular type and the most satisfactory made. It is so constructed that the water flows down through it in an irregular course.

The air as it is drawn through by the fan is broken up by striking irregular fins. These deflect the air and make it sweep the full surface of the passage and carry the heat off with it. It is much more expensive to build than other types.

The McLaughlin-Buick radiator is so mounted on the radiator support that the core is relieved of all strains, and the possibility of the radiator leaking is reduced to a minimum and efficient operation is assured.

The appearance of the shell, with its rounded corners and slightly crowned front adds much to the distinctiveness of the car and contributes to that combination of serviceability and beauty which makes the McLaughlin-Buick the greatest dollars and cents value in the automobile world.

THE McLAUGHLIN-BUICK VALVE-IN-HEAD PRINCIPLE

THE previous pages have described the outstanding features of the McLaughlin-Buick Valve-in-Head engine and have explained how it has been developed to the point where it is now vibrationless beyond belief.

But too much emphasis cannot be laid on the point that these are developments and that the basic principles of the McLaughlin-Buick engine are the same as they have always been.

And it is not surprising that McLaughlin-Buick adheres so strictly to these principles because the result is that the McLaughlin-Buick Valve-in-Head engine develops more power per cubic inch displacement than any other type of engine. At the same time, in proportion to the power developed, the McLaughlin-Buick Valve-in-Head engine is the most economical in the consumption of oil and gasoline.

McLaughlin-Buick owners, of course, know the reason for this but for the benefit of others, who are just making their acquaintance with McLaughlin-Buick, we give here a summary of the McLaughlin-Buick Valve-in-Head principle.

Determining engine efficiency

INTERNAL combustion engines are all heat engines. In other words, they develop their

power by converting the fuel used in operating them into heat. It is the expansion of the heated gases resulting from each explosion in the cylinders that supplies the impulses necessary to run the engine.

So, as far as the engine is concerned, a gallon of gasoline represents so many heat units, and the greater the percentage of these heat units that can be converted into actual working power, the greater the efficiency—or economy—of the engine will be. Unfortunately it is impracticable to use all of the heat generated in such an engine for power because, unless some means of cooling the engine is used, the heat soon becomes so great as to be destructive.

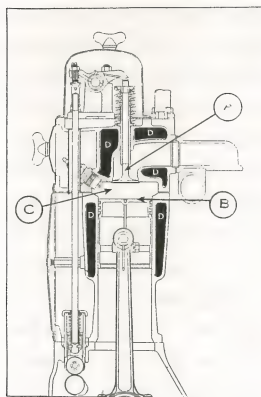
The less water jacketing the better

So, in making the cylinder castings, water passages are cast around the cylinders in such a manner as to allow the excess heat to escape through the cylinder walls into the water, which in turn is cooled by the radiator on the front of the car. It is quite evident, therefore, that the less water-jacketed space there is in an engine, the greater the efficiency will be, because a smaller area of the cylinder walls and combustion chamber will be exposed to the cooling influence of the water.

It should be understood that in all cases both inlet and exhaust valves form a part of the combustion chamber, where the heat is greatest, and in consequence it is necessary to water jacket the valve chambers as well as the tops and sides of the cylinders.

In some engines there is a large pocket on the side of each cylinder in which the valves are located. This pocket is water-jacketed.

In the McLaughlin-Buick Valve-in-Head



Side sectional view of a cylinder from the McLaughlin-Buick Valve-in-Head engine. Note that the valves (A) are in a straight line above the pistons (B) in the center of the combustion chamber (C). Exhaust gases are quickly and easily expelled and there is a minimum of water-jacketed space (D). Hence there is less opportunity for heat, which is power, to escape. This is one of the reasons for the greater power of the McLaughlin-Buick Valve-in-Head engine.

engine there is just a plain, unbroken cylinder, with the valves located in the head of the cylinder. And as this space is already water-jacketed it follows that the McLaughlin-Buick Valve-in-Head engine affords the minimum of water-jacketed space that is possible to be secured for any given size of cylinder. This has an important bearing on the efficiency of the engine.

Now, if we regard our gasoline as so many heat units, it is quite apparent that the fewer of these heat units that are wasted through the water-jacketed surfaces, the more will be left in the form of actual power directed against the pistons.

Then because the big valves in the McLaughlin-Buick Valve-in-Head engine are located in a straight line above the

pistons, the dead exhaust gases are quickly and easily expelled through them at the conclusion of the power stroke, instead of being forced around corners and downward through a much larger chamber, as in some other types of engines.

Why the McLaughlin-Buick engine is most efficient

THE net results of these main characteristics of design are to give the McLaughlin-Buick Valve-in-Head engine more perfect combustion than any other type of engine, a quicker ignition of the charge and a smaller loss of heat through the water jackets. The sum of these advantages in design is more power with less gasoline consumption.

THE McLAUGHLIN-BUICK TRANSMISSION

THE transmission of an automobile provides for different ratios of speed between the engine and the drive shaft.

Ease in attaining these various speeds, or shifting gears, as it is called, is most important to motoring satisfaction, and McLaughlin-Buick has developed it to the highest point. The gear shift lever is conveniently placed and is of the right length to insure ease of handling, and the gears respond so easily and quietly that they can be shifted by the pressure of the finger tips alone on the gear shift lever. This fact, combined with the soft action of the McLaughlin-Buick clutch, and the dependable McLaughlin-Buick steering mechanism, makes the McLaughlin-Buick extremely easy and pleasant to drive. Women especially appreciate the effortless ease with which it is handled.

The McLaughlin-Buick transmission is the selective, sliding gear type, with three speeds forward and one reverse. It is built as an integral part of the engine, eliminating the need for extra universal

joints, which would be required if the transmission was designed as a separate unit. This absence of universal joints at these points in itself contributes much toward making the McLaughlin-Buick vibrationless and quiet beyond belief, but not content with this alone, McLaughlin-Buick engineers have further developed the transmission to insure still smoother and more silent operation.

They have provided larger gears, thus reducing the pressure on the teeth. They have adopted new tooth forms which bring more teeth into contact at one time, giving a smooth rolling action. They have adopted one-piece forged counter gears which add materially to the quietness of operation. And they have designed a special and larger transmission case which effectively dampens gear hum. In addition to these advancements, a large and positive pilot has been designed to assure correct alignment between the engine and the transmission. The transmission bell housing and the flywheel housing have been strongly reinforced.

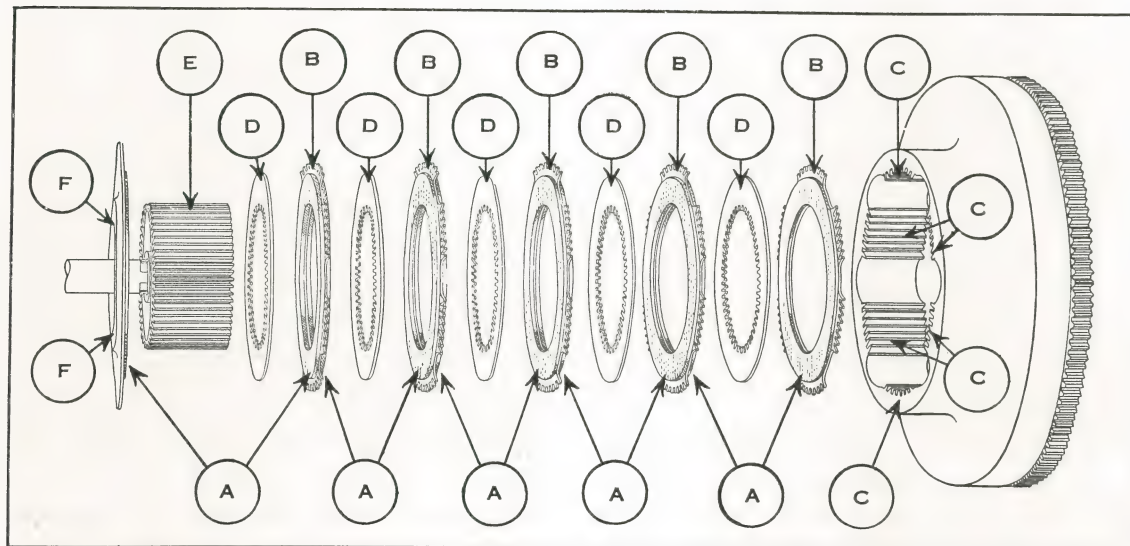


Diagram showing the parts which make up the McLaughlin-Buick multiple disc clutch. The ten friction surfaces are marked (A). The driving plates are indicated by (B), the teeth on the outer edge fitting into the teeth on the inside of the flywheel (C). The driven plates (D), with teeth on inside, fit into the teeth on the clutch hub (E). Pressure on the clutch pedal separates the driving plates from the driven plates and so disconnects the power of the engine from the

transmission. When the pressure is removed from the clutch pedal the clutch spring bearing on the plate (F) forces the plates together. The friction surfaces grip the driven plates and transmit the power of the engine to the transmission. The action of this clutch is smooth and positive. The large friction area eliminates the need for heavy clutch springs, accounting for the slight pressure required to disengage the clutch.

THE McLAUGHLIN-BUICK MULTIPLE DISC CLUTCH

AN automobile engine must be in motion before it can take up its load. To make this possible it must be temporarily disconnected from the rest of the driving mechanism. When it is ready to take up the load the engine must again be surely and positively connected with the driving units.

In the McLaughlin-Buick this is accomplished with a multiple disc dry plate clutch consisting of driving plates fitting into the flywheel and driven plates attached to the clutch hub. These plates are held together by a spring and the friction of their surfaces.

The driving plates, turning with the flywheel, cause the driven plates to revolve also and thus transmit power to the drive shaft.

Pressure on the clutch pedal releases the spring that holds the plates together, and the engine is thus no longer connected. This can be easily understood by a glance at the accompanying diagram.

As the McLaughlin-Buick multiple disc clutch has ten friction surfaces, only a light spring located in the center, is needed to hold the plates together. Therefore, just a slight pressure on the clutch pedal is necessary to disengage the spring, and release the clutch plates. All the rotating parts are light. They quickly stop spinning when the clutch is disengaged and permit a very easy gear shift. The clutch is always in running balance and engagement is therefore smooth and pick-up rapid.

Easy disengaging of the clutch is one of the many features that makes the driving of a McLaughlin-Buick a pleasure, especially for women.

It is very seldom that any adjustment of the clutch pedal is necessary, and Mc-

Laughlin-Buick has made such adjustment a very simple operation. It has provided a wing nut which can be turned by hand, in place of a nut which would require a wrench, another example of McLaughlin-Buick's attention to owners' convenience.

THE McLAUGHLIN-BUICK STEERING GEAR

McLAUGHLIN-BUICK'S principle of building each unit of the car with a generous extra margin of strength, is well demonstrated by the McLaughlin-Buick steering gear.

The McLaughlin-Buick steering gear is of the worm and split nut, semi-irreversible type, fitted with a ball bearing. It is the most expensive and highly developed type known to-day.

There are five bearing surfaces between the worm and the grooves in the split nuts. The wear is thus spread over a large area and reduced practically to nothing. Any slight wear that does develop is easily taken up merely by lifting the hood and giving the adjusting nut on the steering column a slight turn.

Easy steering, a noteworthy feature of McLaughlin-Buick, results from this ideal steering gear in combination with the ball bearings in the steering knuckles on the front axle, the pivotal balance of the front wheels, and the proper angle of the front axle. This combination also aids the car to hold the road at all speeds.

Stronger steering arms and knuckles

IN anticipation of greater speeds, so easily attainable with the new smooth operating McLaughlin-Buicks, the steering arms on the McLaughlin-Buick front axle have been increased in size, and the steering knuckles have been made from special alloy steel, giving a fifty per cent. increase in strength.

The front axle is the drop-forged, I-beam

type specially designed to afford an extra margin of strength above that required to stand the stress and strains due to the use of front-wheel brakes.

It is tipped back at a proper angle. This contributes very greatly to the ability of the car to hold the road and were it not for this tilting of the axle, the car would be harder to drive, especially at high speeds.

At the same time this mounting of the front axle at an angle throws a heavy strain on the spring seats. But McLaughlin-Buick has provided for this. The spring seats are forged integrally with the axle, instead of being brazed or riveted on, and they thus possess a maximum of strength.

Examination of the McLaughlin-Buick will show that at every point McLaughlin-Buick has provided an extra margin of strength. This accounts for the durability and dependability of the car, and helps to make it the greatest automobile value on the market.

Balanced wheels

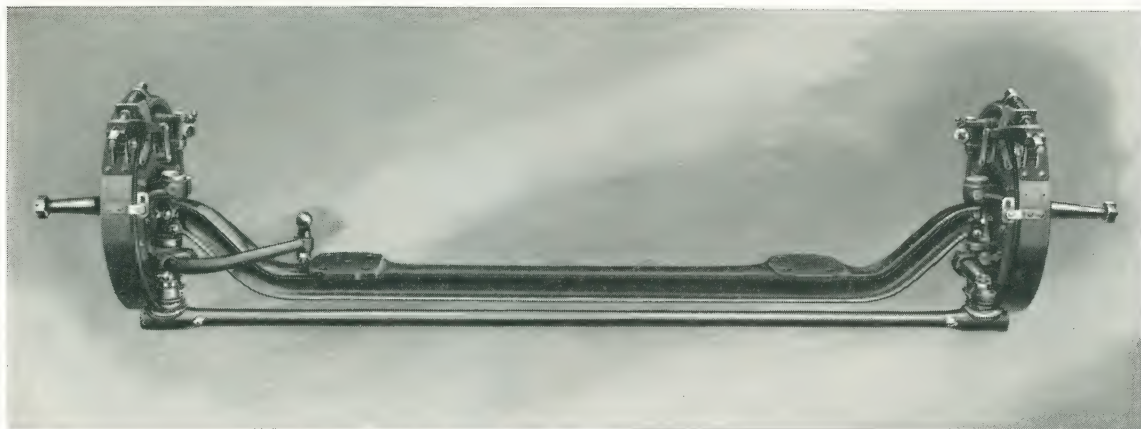
EVEN such a slight weight as the valve, through which the tire is inflated, is sufficient to throw a wheel out of balance. McLaughlin-Buick has counteracted this in the new McLaughlin-Buicks, bringing all four wheels to perfect balance.

This contributes to the smooth operation advanced by the other new developments.

The wheels are artillery type with extra large hubs and spokes of great strength. They are the most substantial and satisfac-

THE GREATEST McLAUGHLIN-BUICK EVER BUILT

FEATURES THAT MAKE THE McLAUGHLIN-BUICK EASY TO DRIVE



The brake drums and bands on the McLaughlin-Buick furnish a braking area sufficient to stop the wheels quickly and smoothly. The front axle is drop-forged in one piece. There are no brazed or riveted parts, therefore the axle possesses maximum strength.



The McLaughlin-Buick steering gear is the worm and split nut, semi-irreversible type. A large bearing surface is provided by the five points of contact between the worm and the grooves on the nuts, reducing wear to a minimum and providing an added factor of safety. It is the ball bearing type which adds to the ease of operation. Road shocks are absorbed and do not reach the steering wheel.

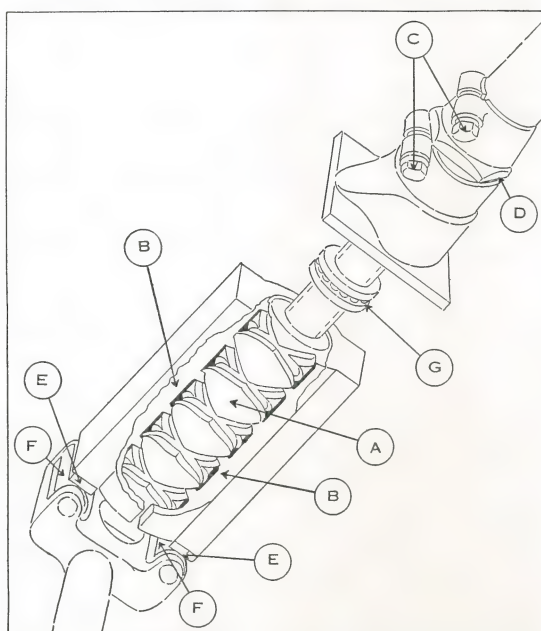
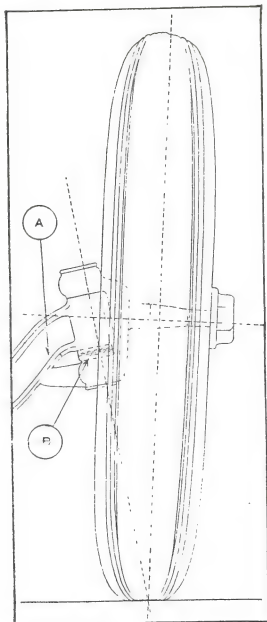


Diagram showing the construction of the McLaughlin-Buick steering gear. The worm (A) works in the groove on the split nuts (B). It operates in a bath of lubricant inside the steering gear housing. Adjustment is simply made by loosening the pinch bolts (C) and turning down the adjusting nut (D). The steel ends (E) of the split nuts operate on the rollers (F) on the rocker shaft, to which are attached the steering arm and rods, thus moving the wheels in the desired direction. Thrust is taken by the ball bearing (G).



Pivotal balance, which has much to do with the easy steering of the McLaughlin-Buick, is here illustrated. The wheel and the axle are so constructed that the weight of the car is at the center of the tire, as shown by the lines drawn through the king pin and the tire, meeting at the ground. McLaughlin-Buick's five bearing surface steering gear, with axle set at a proper angle, and the pivotal balance of the front wheels accounts for the easy manner in which the McLaughlin-Buick steers. Axle (A). Ball bearing (B).



Perfect balance of all four wheels contributes to McLaughlin-Buick performance. The valve through which the tire is inflated is counterbalanced by a weight directly opposite, on the wheel rim.

tory type known. In appearance, too, they are unrivaled. All have tires with black sidewalls, and the rims of the wheels, also, are finished in black, emphasizing the massiveness of the tires. This has the advantage,

as well, of making the wheels unobtrusive so that the eye is not distracted from the wonderful, sweeping lines of the beautiful McLaughlin-Buick bodies with their attractive combinations of Duco colors.

McLAUGHLIN-BUICK FOUR-WHEEL BRAKES

FOR more than three years, McLaughlin-Buick four-wheel brakes have been meeting the supreme test of day to day service in the hands of thousands of owners. The general satisfaction of these owners is a genuine tribute to the thoroughness with which McLaughlin-Buick designed and tested this feature before introducing it to the automobile world in America.

McLaughlin-Buick mechanical four-wheel brakes are the external, contracting type. The brake bands contract on brake drums with large bearing surfaces, and these drums are securely bolted to the wheels.

The braking system is designed to exert, automatically, slightly greater pressure on the rear brakes. In turning a corner the brake on the outside front wheel automatically releases, permitting the wheel to run free and giving perfect steering control when turning corners with the brakes applied.

Tires and brake bands both last longer because the wear is distributed over four tires and brake bands instead of two.

The increased friction between the tires and the road provided by four-wheel brakes makes it possible to stop a McLaughlin-Buick very quickly, and provides the driver with an extra factor of safety.

THE emergency or hand brake on the McLaughlin-Buick is of the internal expanding type, operating on the inside of the brake drums of the rear wheels. It is entirely independent of the four-wheel

service brakes and is used principally when parking the car. It is positive and very dependable in action and the brake lever is very easy to operate.

CONTROLLABLE BEAM HEADLIGHTS

THE motoring world has given a particularly enthusiastic reception to the McLaughlin-Buick controllable beam headlights. They have added immeasurably to the pleasure of night driving.

The beams of light are controlled by a switch mounted in the center of the steering wheel. For country driving the beams go directly out in front of the car, lighting the road for a great distance ahead and for its entire width. By simply shifting the lever, the beams are deflected down directly in front of the car. As they are still of the same strength, there is a large flood of light that makes driving in traffic, or when other cars are met, much safer, and provides great mental comfort to the driver.

Lamps, bulbs and other parts are stationary. The change in the direction of the light rays is made entirely by shifting the current from one filament to the other in the bulb, aided by a specially designed lens built into the lamps.

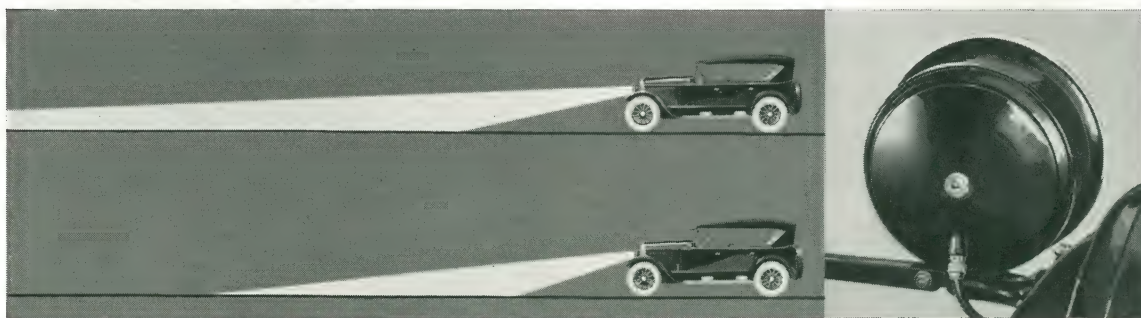
The lamps are fitted with doors that are hinged at the top and fastened at the bottom with a screw for convenience in installing new bulbs when necessary.

The lamps are mounted on a cross bar extending from fender to fender, instead of being attached directly to the fender with a stay rod in between. This eliminates the necessity for right and left-hand lamps and in case of fender damage the lamps are not so apt to be distorted.

JACK LUG ON REAR AXLE

WHILE devoting unceasing efforts to developing the great basic principles of automobile construction, Mc-

Laughlin-Buick at the same time is always alert for minor, but important points of comfort and convenience.



This illustration indicates the manner in which the light rays are raised or lowered by the simple operation of the switch lever in the center of the steering wheel. The McLaughlin-Buick headlights are simply adjusted by

the screw located on the rear of the lamp. The illustration also shows the manner in which the lights are mounted, eliminating the necessity for right and left-hand lamps.

A good illustration of this fact is the jack lug that has been provided on the rear axle for convenience in raising the rear wheels from the ground when changing

tires. The lug is a convenient and easily accessible point of purchase for the jack, and makes the work of raising a rear wheel extremely simple.

CANTILEVER REAR SPRINGS

THE contribution to enjoyable motoring, made by the smooth running McLaughlin-Buick Valve-in-Head engine, is increased by the easy riding provided by McLaughlin-Buick springs in combination with low pressure tires and very flexible seat cushions.

The rear springs of the McLaughlin-Buick are the cantilever type. There is a long, flexible front section to absorb shocks on ordinary roads, while a short, stiff rear section takes up the shocks on rougher roads.

This short, stiff spring section, extending

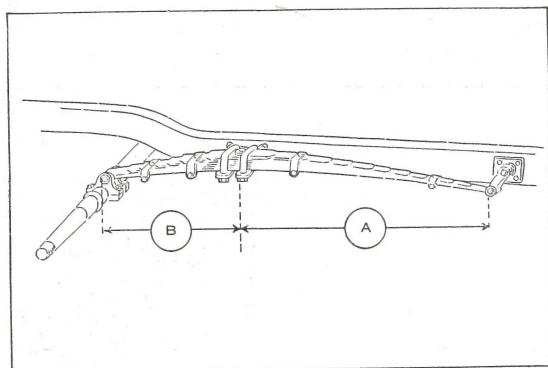
from the axle to the frame, has another notable motoring advantage. It reduces sidesway to a greater degree than any other type of spring.

The cantilever rear springs for each McLaughlin-Buick model are designed with particular regard to the type and the weight of the body they must support—another instance of the care that McLaughlin-Buick takes to insure that every McLaughlin-Buick gives complete motoring satisfaction.

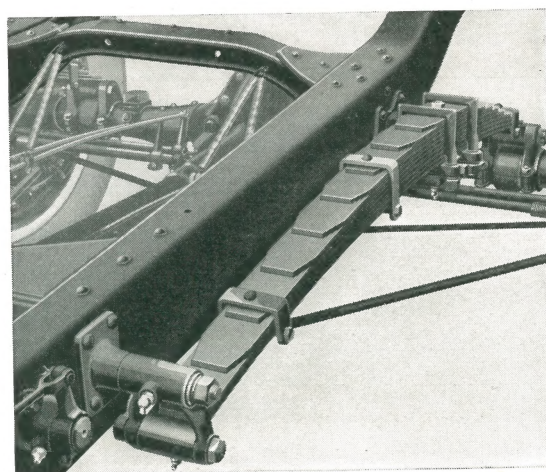
THE UNIVERSAL JOINT

THE McLaughlin-Buick owner can forget that such a thing as a universal joint exists. There is only one universal joint on a McLaughlin-Buick and it is automatically lubricated from the transmission. The owner never has to touch it. This single

universal joint is enclosed in the universal ball housing which connects the torque tube with the transmission and absorbs all driving strains. It is completely sealed so that no dust or other foreign matter can enter it.

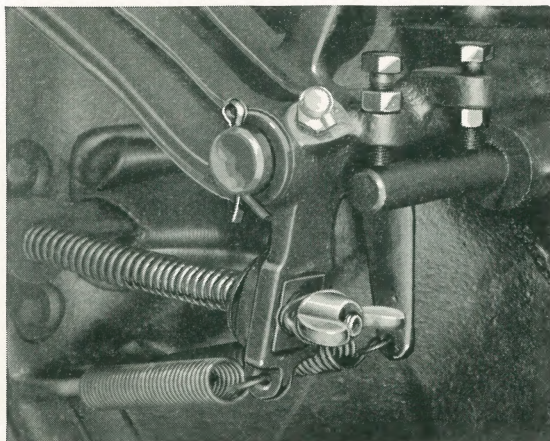


The long section (A) of the McLaughlin-Buick cantilever rear springs absorbs ordinary shocks. The short, heavy rear section (B) absorbs the greater shocks. As the frame and body are supported by the short section (B), from the axle to the spring bracket on the frame, the possibility of the body swaying in turning corners is reduced to a minimum.

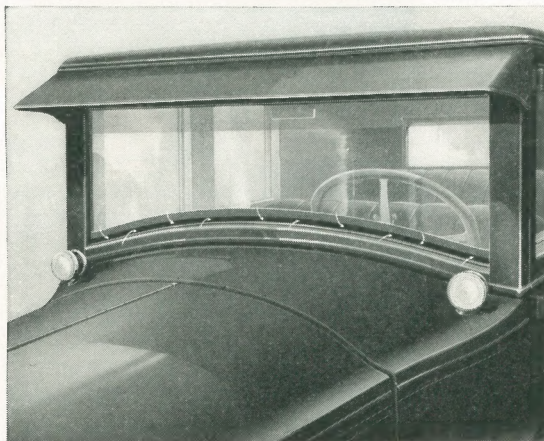


The McLaughlin-Buick cantilever rear springs.

FEATURES THAT MEAN COMFORT AND CONVENIENCE

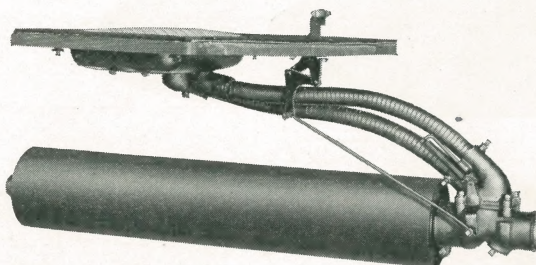


It is very seldom that the smooth-operating McLaughlin-Buick multiple disc clutch needs adjustment, but it is simply accomplished when necessary by means of the wing nut illustrated here. This eliminates the need of a wrench which would be necessary if an ordinary nut were used. Small points like these illustrate the thoroughness of McLaughlin-Buick construction.

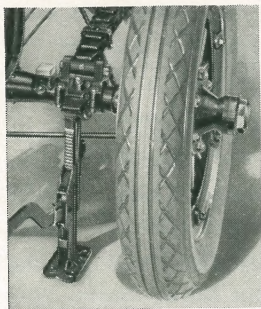


The Fisher VV windshield on all McLaughlin-Buick closed models is raised by a handle inside the car to admit air through the ventilator or, when raised higher, in a direct current. When the windshield is raised slightly it opens a vent the entire width of the car. Air is deflected through this vent down into the front compartment across the whole width.

The construction of the heater on Models Fifty, Fifty L, Fifty-one, Fifty-four C and Fifty-eight is shown in this picture. Exhaust gas is piped to the heater and then back to the exhaust pipe where it must pass through the muffler.

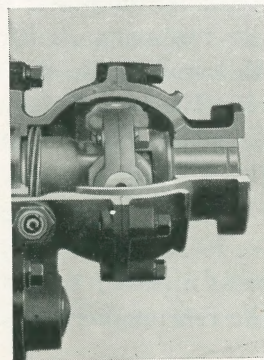
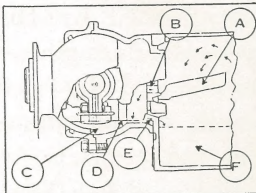


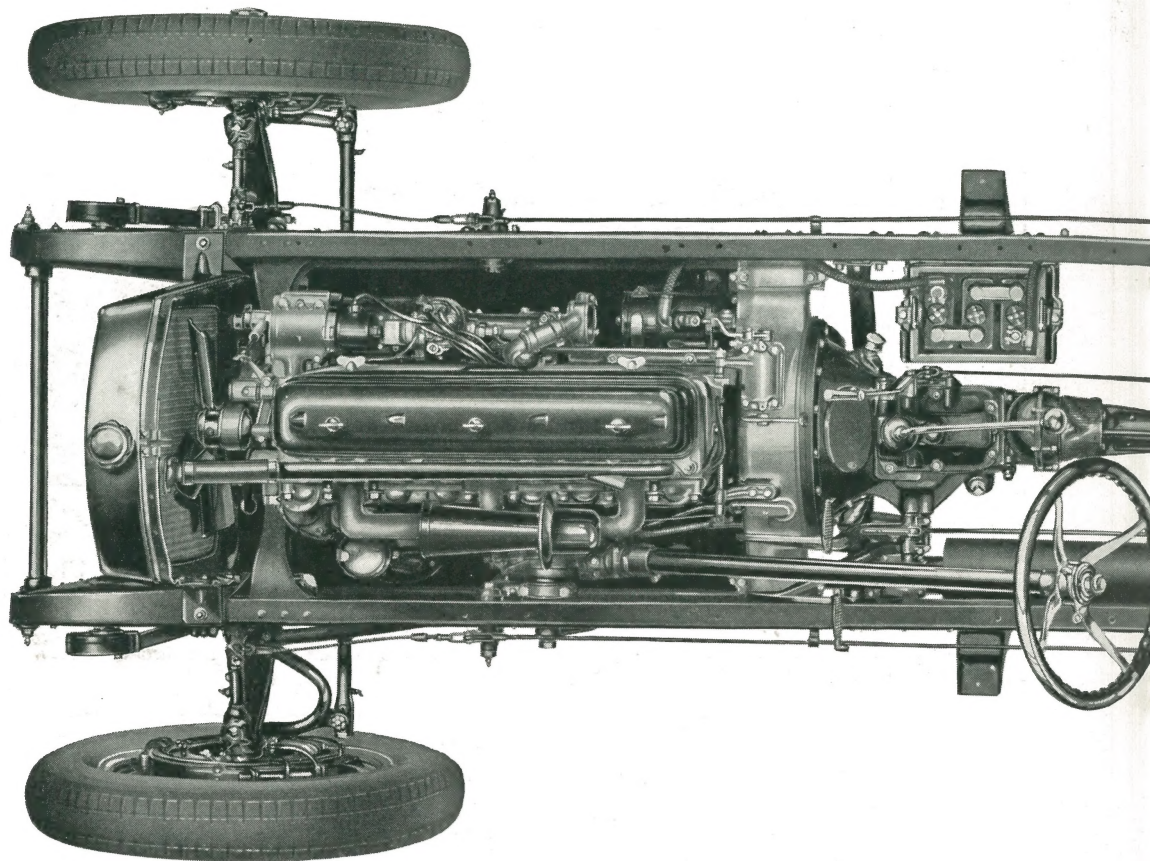
Noise is thus eliminated, the cars operating as quietly with the heater on as when off. The heater valve is opened simply by pressing down on a lever with the foot and is closed just as easily.



A jack in use under the lug on the rear axle.

The McLaughlin-Buick universal joint is automatically lubricated by lubricant thrown from the transmission gears into the trough (A) then running through the hole (B) into the universal joint ball housing, and into the reservoir (C), thus providing the universal joint with a constant bath of lubricant. When the lubricant reaches the level (D) it passes through the opening (E) back into the transmission case (F). It is never necessary to pay any attention to the universal joint on a McLaughlin-Buick so far as lubrication is concerned.





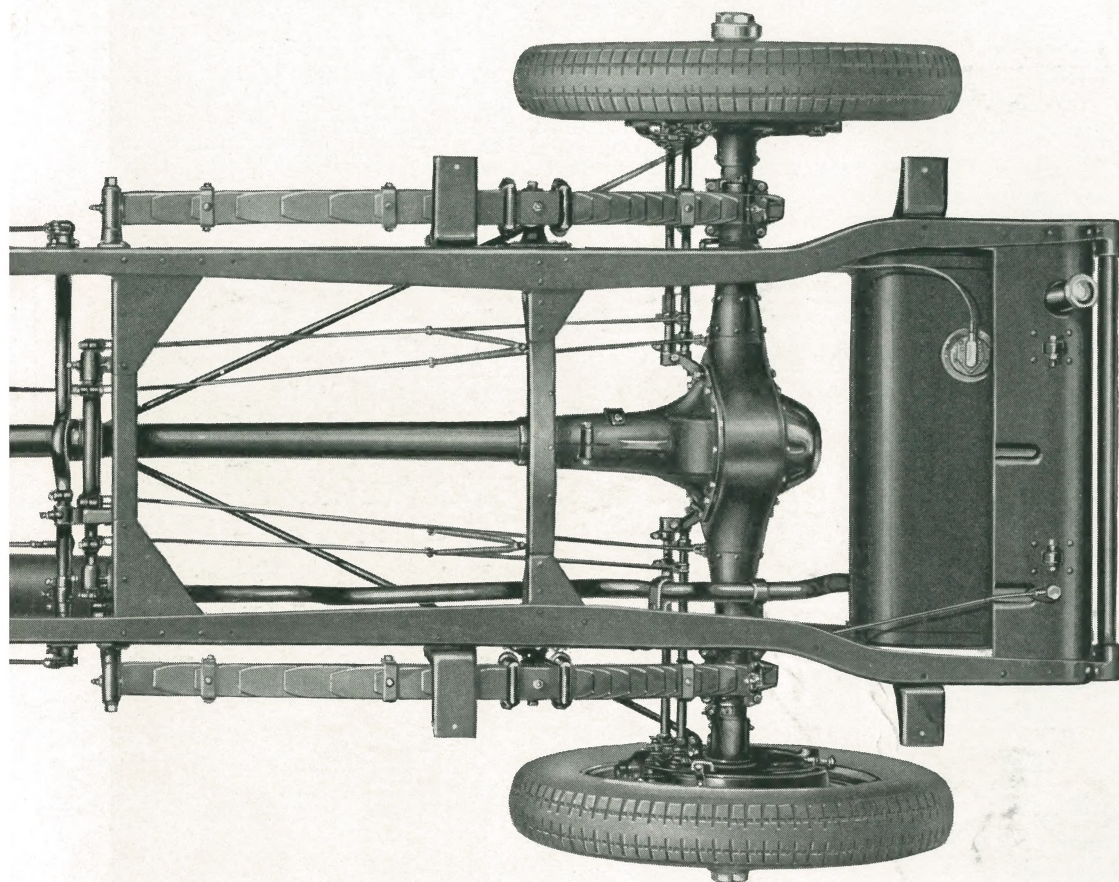
THE McLAUGHLIN-BUICK SEALED CHA

STURDY, correctly designed, well built, the McLaughlin-Buick sealed chassis completes the motoring satisfaction afforded by the McLaughlin-Buick Valve-in-Head engine—vibrationless beyond belief—and by the beautiful and comfortable McLaughlin-Buick bodies.

Always exceptionally strong, it has been made still more so by the addition of another cross member to the frame directly back of the rear engine arms.

The chassis is completely sealed so that no dirt or other matter can reach any working part, and no lubricant can escape.

As you glance at its long, stalwart design you have an excellent opportunity to note the McLaughlin-Buick torque tube drive, with but one universal joint; the McLaughlin-Buick floating type rear axle; cantilever rear springs and semi-elliptic front springs; the drop-forged, I-beam front axle; the large gasoline tank and other features.



SIS---VIBRATIONLESS BEYOND BELIEF

In doing so you will gain a new appreciation of the value of McLaughlin-Buick's tremendous engineering resources, for it must be remembered that no unit, no matter how valuable in itself, has full worth until it has been carefully related to all the other units of the car.

By constant development of basic principles for twenty-two years, McLaughlin-Buick engineers have developed this careful co-ordination of units to a superlative degree. The result is performance—vibrationless be-

yond belief. The chassis is quickly and easily lubricated by means of a pressure gun. This forces lubricant into the bearings under very high pressure, and at the same time eliminates the old lubricant. McLaughlin-Buick engineers have taken great pains to make all lubrication points easily accessible, and to reduce the whole work of lubrication to the simplest point consistent with efficiency just as they have simplified all other parts of the McLaughlin-Buick.